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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Taku Kodama

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8791

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10/24/2008

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EXAMINER

LEE, JOHN W

ART UNIT

PAPER NUMBER

2624

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,882	<b>Applicant(s)</b> KODAMA ET AL.	
	<b>Examiner</b> JOHN Wahnkyo LEE	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-16, 19, 21-24, 27, 31, 35 and 37-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-18, 20, 25-26, 28-30, 32-34, 36 and 42-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The response received on 12 August 2008 has been placed in the file and was considered by the examiner. An action on the merits follows.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 17-18, 20, 25-26, 28-30, 32-34, 36 and 42-43 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 30 is objected to because of the following informalities: The preamble of claim 30 is incoherent with the preamble of the independent claim 29. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 25-26, 28-30 and 32 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent

Art Unit: 2624

Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101" – publicly available at USPTO.GOV, "memorandum to examining corp"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. In order for a process to be "tied" to another statutory category, the structure of another statutory category should be positively recited in a step or steps significant to the basic inventive concept, and NOT just in association with statements of intended use or purpose, insignificant pre or post solution activity, or implicitly.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 17-18 20, 25-26, 28-30, 32-34, 36 and 42-43 are rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in

such a way as to reasonably convey to one skilled in the relevant art that the

inventor(s), at the time the application was filed, had possession of the claimed

invention. Claims 17-18, 20, 25-26, 28, 33-34 and 36 recite "different compression

method ... at different quantization ratio," and claims 29-32 recite "same compression

ratio ... at different quantization ratio", which are not fully disclosed in the specification.

It is required for the applicant to fix this problem.

Art Unit: 2624

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 17-18, 20, 25, 26, 28-30, 32-34, 36 and 42-43 recite the limitation "the components of the text region, the drawing region, the photograph, and the background region." There is insufficient antecedent basis for this limitation in the claims. Moreover, in claim 43, it specifies as "the text region and the drawing region" when the independent claim 17 recites "at least one of a text region, a drawing region, a photograph region, and a background region"

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 17-18, 20, 25, 26, 28-30, 32-34, 36 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2001/0028748) in view of Navon et al. (US 7,085,422).

Regarding claim 17, Sato discloses an image processing apparatus (Fig. 1A-1C, 7, 17A, and 17D; abstract), comprising: a segmenting unit to segment an image into regions (Fig. 1B-2, 7-2, and 17A-2; paragraph [0170], "subbands" and "wavelet transform"); a generating unit to make the one or more regions segmented by the segmenting unit into components (paragraph [0171], "regions of a predetermined unit");

Art Unit: 2624

an encoding unit to encode the components made by the generating unit (paragraph [0171], "regions of a predetermined unit") into code data using a compression method (Fig. 1B-4, 7-4, 17A-4; paragraphs [0220]-[0225], "entropy encoding section" and "bit plane"); and a combining unit to combine the code data encoded by the encoded unit into a codestream (Fig. 1A-11, 3A-3E, 7-11, 17A-11; paragraphs [0220]-[0223], "code sequence construction section" and "code sequence"). However, Sato does not disclose all the claim limitations. Instead of Sato, Navon discloses segmenting at least one of a text region, a drawing region, a photograph region, and a background region (col. 4, lines 22-23, "foreground may comprise text and graphics"; Fig. 3; col. 4, lines 27-31, "image is separated in foreground and background.") and using different compression methods ("compressing the foreground and the background separately, typically with the foreground stored with a higher quality compression method than the background (col. 3, lines 46-50). The foreground may be compressed with an almost non-lossy compression method, and the background may be compressed with a high lossy compression method (abstract; col. 3, lines 50-53)"), the components of the text region, the drawing region, the photograph region, and the background region (col. 4, lines 22-23, "foreground may comprise text and graphics"; Fig. 3; col. 4, lines 27-31, "image is separated in foreground and background.") encoded at different quantization ratios (col. 3, lines 54-65, "foreground ... coarse quantizers ... background ... fine quantizers ...").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Navon's invention in Sato's invention to provide an improved image separation and compression tool as suggested by Navon (col. 1, lines 34-35).

Regarding claim 18, Sato further discloses the encoding unit divides the image into a plurality of tiles and hierarchically encodes the respective tiles into code data (paragraph [0004], “hierarchical encoding scheme”).

Regarding claim 20, Sato further discloses an image processing apparatus as claimed in claim 21, further comprising: a storing unit to store the codestream combined by the combining unit (Fig. 7-10; paragraph [0261], “code sequence storage section”); a decoding unit to decode the codestream stored in the storing unit into an image (Figs. 1C and 7, “DEC”; claim 21); and an image forming unit to form the image decoded by the decoding unit (Figs. 7-8 and 7-12, “image construction section” and “image output section”).

Regarding claim 25, claim 25 is analogous and corresponds to claim 17. See rejection of claim 17 for further explanation.

Regarding claim 26, claim 26 is analogous and corresponds to claim 18. See rejection of claim 18 for further explanation.

Regarding claim 28, claim 28 is analogous and corresponds to claim 20. See rejection of claim 20 for further explanation.

Regarding claim 29, Sato discloses an image processing method (Fig. 1A-1C, 7, 17A, and 17D; abstract), comprising: a segmenting an image into regions (Fig. 1B-2, 7-2, and 17A-2; paragraph [0170], “subbands” and “wavelet transform”); a generating one or more regions into components (paragraph [0171], “regions of a predetermined unit”); converting unit to convert the respective components from a first data format to a second data format, where the first and second data formats are different (Fig. 1B-3, 7-

Art Unit: 2624

3, 17A-3; paragraphs [0218] and [0219], "quantization section"); encoding the components into code data using a same compression method (Fig. 1B-4, 7-4, 17A-4; paragraphs [0220]-[0225], "entropy encoding section" and "bit plane"); and combining the code data into a codestream (Fig. 1A-11, 3A-3E, 7-11, 17A-11; paragraphs [0220]-[0223], "code sequence construction section" and "code sequence"). However, Sato does not disclose all the claim limitations. Instead of Sato, Navon discloses segmenting at least one of a text region, a drawing region, a photograph region, and a background region (col. 4, lines 22-23, "foreground may comprise text and graphics"; Fig. 3; col. 4, lines 27-31, "image is separated in foreground and background.") and the components of the text region, the drawing region, the photograph region, and the background region (col. 4, lines 22-23, "foreground may comprise text and graphics"; Fig. 3; col. 4, lines 27-31, "image is separated in foreground and background.") encoded at different quantization ratios (col. 3, lines 54-65, "foreground ... coarse quantizers ... background ... fine quantizers ...").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Navon's invention in Sato's invention to provide an improved image separation and compression tool as suggested by Navon (col. 1, lines 34-35).

Regarding claim 30, Sato further discloses the encoding the components into code data comprising dividing the image into a plurality of tiles and hierarchically encoding the respective tiles into code data (paragraph [0004], "hierarchical encoding scheme").



Regarding claim 32, Sato further discloses storing the codestream (Fig. 7-10; paragraph [0261], “code sequence storage section”); decoding the codestream into an image (Figs. 1C and 7, “DEC”; claim 21); and forming the image that results from decoding the stored codestream (Figs. 7-8 and 7-12, “image construction section” and “image output section”).

Regarding claim 33, Sato further discloses that the invention is implemented when the program codes read out from the storage medium having a CPU for the performing the functions (paragraph [0311]). Moreover, claim 33 is analogous and corresponds to claim 17. See rejection of claim 17 for further explanation.

Regarding claim 34, Sato further discloses that the invention is implemented when the program codes read out from the storage medium having a CPU for the performing the functions (paragraph [0311]). Moreover, claim 34 is analogous and corresponds to claim 18. See rejection of claim 18 for further explanation.

Regarding claim 36, Sato discloses that the invention is implemented when the program codes read out from the storage medium having a CPU for the performing the functions (paragraph [0311]). Moreover, claim 36 is analogous and corresponds to claim 20. See rejection of claim 20 for further explanation.

Regarding claim 42, Sato further discloses a charge unit to subject a region in the one or more regions of data to charge (Fig. 1A-13; paragraph [0212], “image quality setting section”).

Regarding claim 43, Sato further discloses a converting unit to convert data formats of the text region and the drawing region into binary data and to convert a data

format of the photograph region into multi-level data (Fig. 1B-3, 7-3, 17A-3; paragraphs [0218] and [0219], “quantization section”).

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN Wahnkyo LEE whose telephone number is (571)272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624

/John Wahnkyo Lee/

Application/Control Number: 10/763,882

Page 11

Art Unit: 2624

Examiner, Art Unit 2624